

ABSTRACT

The invention relates to a series (1) of electrolysis cells for the production of aluminum by fusion electrolysis, comprising at least two lines of cells, arranged transversely, an internal correction circuit (200) with at least one internal correction conductor (20, 20') per line, adjacent to the neighboring line and a main connection circuit (400) between the final cells of the lines (101, 101'). In at least one line, the main connection circuit (400) comprises a layer of conductors, each conductor of which extends from the end of the final cell of the line to a given distance (D2, D2') therefrom and the internal correction circuit (200) comprises a section of transverse conductors, arranged at a given distance (D1, D1') from the final cell (101, 101') running along the final cell for a given part L of the length thereof L₀. The invention permits a reduction in the mean supplementary vertical fields to very low values for electrolysis currents of a value greater than 300 kA.